

# PARKING POLICY

## FOR BENGALURU

Draft for Public Consultation – March, 2020



**Directorate of Urban Land Transport**  
Urban Development Department, Government of Karnataka

# PARKING POLICY FOR BENGALURU CITY

(Draft for Public Consultation, 7<sup>th</sup> March 2020)

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## 1. Introduction to Bengaluru

- 1.1 Bengaluru city has seen unprecedented growth in population and consequently in the number of vehicles registered in the city. The data published by the Department of Transportation, Government of Karnataka reveals that the number of registered vehicles in the city has crossed 81 lakhs as of the year 2019 and the compound annual growth rate (CAGR) of vehicle registrations is over 10% per annum.
- 1.2 The roads in Bengaluru are congested with typical average speed on major roads during peak hours being around 15 km/h and average public bus transport speed being around 10 km/h. Various initiatives like introduction of metro rail, construction of flyovers, etc. have not resulted in perceivable changes in alleviating congestion on the roads of Bengaluru.
- 1.3 Projections as per the draft Revised Master Plan (RMP) for Bengaluru, 2031 reveals that the population would at least double over the next 15 years and the total number of trips would triple in the same period. The projections of RMP 2031 paint a grim picture of a stressed city with degrading quality of life & health conditions. For Bengaluru to become a liveable city, it is required to address a wide variety of issues, of which parking is one of the most critical. Addressing parking is expected to have many consequential impacts desired for Bengaluru, such as increased road space available for pedestrian and vehicular circulation, reduced vehicular travel demand and lower pollution.

## 2. State of Parking in Bengaluru

- 2.1 Visible clearly from the roads in Bengaluru, parking is largely unregulated across the city. On-street parking is rampant as it is not chargeable in most places and is increasingly causing issues of safety and reduced carrying capacity of roads. Most spaces where parking happens today are not clearly marked as parking bays and there is no signage put up. There is no regulation or enforcement of parking citywide and where enforced, lack of adoption of technology makes management and enforcement of parking an enormous task.
- 2.2 The high parking demand seen on roads, especially in business areas is not only due to the sustained spurt in vehicle ownership and population over the past decade but also because of the absence of an efficient public transport system that covers all parts of the city, efficient last and first mile connectivity and demand management measures such as pricing of parking.
- 2.3 The civic agency and other public and private entities have built off-street parking infrastructure (multi-level parking lots) in few locations, but the approach has not been successful as on-street parking still remains unmanaged, free of cost and unenforced. Such off-street facilities appoint its own concessionaries but the management is often carried out manually and data is neither collected nor shared in the absence of a data sharing policy leaving the civic agency as well as public with little information on the quantum and type of parking that is available and the operational practices adopted by the contractors.
- 2.4 With new mobility systems that have emerged in Bengaluru recently like the metro, aggregator taxis or micro mobility modes, parking has emerged as a pain point in an unprecedented way. In view of these issues, clear cut parking policy and framework to manage parking is necessary.

## 2.5 Enforcement of Parking in Bengaluru: Existing Scenario

As per Karnataka Municipal Corporations (KMC) Act, the civic agency has the obligatory function to not only lay new roads but also construct, maintain, alter and improve all public streets (Chapter 5, section 58, sub-section 13 & 19). The KMC act also under the chapter on licenses and fees (chapter 17, section 348, 349, 350), gives the municipal corporation the power to provide halting places or parking spaces while charging or levying fees for the same. It also further gives Commissioner of the corporation the power to prohibit parking at undesignated places especially around any place where space for on-street or off-street parking has been designated. The corporation may also through the person appointed to collect parking fee seize and detain the motor vehicle if the fee levied is not paid on demand.

2.6 While road space is owned by the Municipal Corporation and parking management is the civic agency's function, the parking enforcement in Bengaluru is done by traffic police as per the provisions of the Karnataka Police Act of 1963. As per the act, it is the duty of the police to regulate and control traffic on streets (Chapter 6, section 69). Further, the traffic police also has the power to make orders for regulation of traffic and for preservation of order in public places. Hence, they may regulate the conditions under which vehicles remain standing on a street and use the street as a halting place (Chapter 4, Section 31, sub-section (b)). Hence, the traffic police is presently enforcing no-parking in accordance with the Karnataka Police Act.

2.7 Traffic police is often unable to enforce no-parking across the city due to lack of adequate policemen and lack of equipment to tow away illegally parked vehicles. This has led to rampant parking violations, leading to traffic congestions, safety issues for all users and a general sense of chaos and disorder on streets. However, it is clear that enforcement is only one key part of parking management and in the absence of an organised and well planned and managed parking regime that is technology supported, the problems we face today will continue.

## 3. Need for Parking Policy

3.1 The civic agency, Bruhat Bengaluru Mahanagara Palike (BBMP) adopted a parking policy for Bengaluru in 2012. However, since its adoption, there have been several changes in the demand for parking such as:

- Commissioning of the metro system,
- Aggregator run taxi systems becoming popular in the city,
- Increasing popularity of micro mobility options like shared cycles and bikes for last mile connectivity,
- Proposal of the State Government like mutation of major arterial corridors into high density corridors for seamless mobility,
- Rapid conversion of residential plots to commercial land use without due enforcement of parking requirements as per bye-laws,
- Infringement of residential roads by vehicles accessing nearby commercial areas,
- Increasing vehicular population.

3.2 Hence, a parking policy that addresses and lays down a clear path for parking management should be adopted to not only indirectly discourage the use of personal vehicles but to also shift essential parking off-street to ease road space for seamless movement of people and vehicles.

## 4. Objectives of the Parking Policy

- 4.1 Bengaluru, a fast growing metropolis, has set its goal to move a major share of its population through mass transit systems like metro, suburban rail and bus based systems. Currently more than 40% of the trips in the city is catered by public transport and RMP 2031 envisages that close to 70% of trips is required to be catered by mass transit/public transport for city to avoid grid-lock. In this context, the parking policy is instrumental in achieving the broader mobility objectives of Bengaluru.
- 4.2 The parking policy proposes to achieve the following objectives through its implementation in a phased manner:
- 4.2.1 **Obj. 1 Move from chaotic parking to well organized parking:**
- Organise and manage on-street parking so as to ensure that parking does not impinge upon seamless vehicular and pedestrian circulation.
  - Shift supply of parking off-street, and minimize on-street parking supply to free up scarce street space for transit and NMT supportive uses.
  - Free-up residential streets from any parking to allow these streets to transform into walkable & liveable streets
  - Inclusive planning of parking supply to support local business opportunities, facilitate people to access social infrastructure and recreational facilities.
- 4.2.2 **Obj.2 Move from free parking to paid parking:**
- Charge the user the true cost of parking to transfer the cost of using a scarce resource from public at large to the beneficiary
  - Unbundle parking charges and make users directly pay for their desired parking convenience
- 4.2.3 **Obj. 3 Move from Government driven parking supply to market driven parking supply & management:**
- Enable faster development of organised off-street parking supply and efficient management through means of private market forces. City needs to move away from a public funded, government created off-street parking regime to a privately financed and market driven off-street parking regime.
- 4.2.4 **Obj. 4 Move from passive & weak enforcement of parking regulations to active management of parking demand:**
- Urban local body to consider parking management as one of its key functions and deliver parking services in a systemic & efficient manner
  - Use of technology in enforcement and management of parking to better address concerns of manpower shortage, efficiency and pilferage.
  - Gradually discourage use of personal vehicles
  - Support and increase the patronage of public transport by cross subsidizing transit & NMT infrastructure through parking revenue

## 5. Parking Policy Directives

In order to achieve the above stated objectives, the policy identifies ten focus areas and offers direction in each.

Mapping of Policy Directives to Objectives	
Objectives	Policy Directives
Obj. 1. Move from chaotic parking to well organized parking	Policy 1: Preparation of Area Level Parking management Plans Policy 3: Streamlining On-street Parking Policy 4: Regulation of Residential Parking
Obj. 2 Move from free parking to paid parking	Policy 2: Charging for Parking
Obj. 3 Move from Government driven parking supply to PPP/market driven parking supply & management	Policy 5: Provision of Off-Street Parking
Obj. 4 Move from weak enforcement of parking regulations to active management of parking demand	Policy 6: Regulation of Transport Vehicles Policy 7: Management of Public Parking Policy 8: Adoption of Technology for Parking Management Policy 9: Enforcement of Parking Policy 10: Parking Revenue Utilization

## POLICY 1: Preparation of area level parking management plans

### 5.1.1 Need for Area Parking Plan:

As the parking demand in an area is met by the overall parking inventory available in an area, parking solutions (for planning and management) should be conceived at an area level rather than at the scale of an individual road or an individual parking lot. Owing to the size and complexity of a metropolitan city like Bengaluru, the city requires a systemic approach to be adopted to determine the actual need for public parking within an area and to identify locations for provision of parking.

5.1.2 The policy proposes to achieve a systemic approach through preparation of an area level parking plan for various zones in Bengaluru.

### 5.1.3 Preparation of Area Parking Plan (APP):

The Directorate of Urban Land Transport (DULT) shall be responsible for the preparation of the Area Parking Plans (APP) for various zones in Bengaluru. DULT may engage professional agencies or consultants for preparation of the APPs in Bengaluru.

5.1.4 Bruhat Bengaluru Mahanagara Palike (hereinafter called as civic agency) shall implement the local area specific / integrated parking plans (Area Parking Plans) for each zone of the civic agency (BBMP Zones) through a dedicated task force in each zone (hereinafter called Zonal Task Force) and in accordance with this policy and the latest Bengaluru Master Plan available at the time of preparation.

5.1.5 The Zonal Task Force shall review, provide approval and implement the Area Parking Plans in their respective jurisdictions (zones), carry out periodical revision of Area Parking Plans and initiate periodical revision of parking fee structure. The Zonal Task Force for each zone

of the civic agency shall be headed by the respective Zonal Commissioner of the civic agency and shall have the following members.

- Representatives of concerned jurisdictional Traffic Police (rank of DCP and ACP)
- Representatives of jurisdictional RTO/ARTO

5.1.6 A committee under the Chairmanship of Additional Chief Secretary, UDD with members as Principal Secretary, Transport Department, Additional Commissioner of Police (Traffic), Commissioner, BBMP and Commissioner, DULT shall be setup (hereinafter referred as Apex Committee) for monitoring the preparation and implementation of APP in all zones. Citizen Representatives and experts may also be involved as special invitees in the Committee. Commissioner, DULT shall be the member convener of the Apex Committee. The Apex Committee shall review the planning and implementation status, approve periodic revision of parking fee structure and provide the necessary co-ordination between agencies for the successful operation of parking in the city. Apex Committee shall exist and perform its functions as mentioned in the policy until the time UMTA/ BMLTA is functional for Bengaluru. Once UMTA/BMLTA is functional, all functions of the Apex Committee shall be taken up by UMTA/ BMLTA.

#### 5.1.7 **Process of preparing the Area Parking Plan**

The following process should be followed while preparing the Area Parking Plans to ensure consistency across the various zones:

- 5.1.7.1 Delineate the Zone into parking districts for the ease of surveying, planning and administering parking in the Zone. These parking districts shall be typically 2-5 square km in size, maybe larger in areas with less population density/commercial activity, but not exceeding 10 sq. km.
- 5.1.7.2 Identify the existing parking inventory (on-street and off-street) in the Zone.
- 5.1.7.3 Assess the extent of parking in the Zone over the day, which includes, on-street, off-street and illegal parking during weekdays and weekends
- 5.1.7.4 This shall include assessment of parking turnover, parking duration, types of vehicles parked, etc. for each identified parking lot (currently operating legally or illegally).
- 5.1.7.5 Assess the willingness-to-pay for parking at different areas in the zone for on-street and off-street parking. Based on the willingness-to-pay, assess the likely demand for parking at different parking districts in the Zone (only for the first time)
- 5.1.7.6 Identify suitable locations off-street and some locations on-street (if needed) to meet the likely parking demand in the area.
  - Meeting parking demand off-street shall be prioritized to the extent possible, before considering any on-street parking.
  - Identified off-street locations shall have proper vehicular accessibility and shall be safe for people to access by foot as well.
- 5.1.7.7 The plan for provision of off-street and on-street parking for different parking uses (commercial, residential, transport vehicles, IPT stands) shall be prepared in compliance to primary objectives of this policy and to all the policy directives mentioned further in this document.
- 5.1.7.8 APP shall differentiate on-street parking into 2 categories: Commercial and Residential for the purpose of facilitating paid parking system. On-street parking categorization should be made based on the following criteria:

<b>Type of On-street Parking</b>	<b>Abutting Landuse</b>
<b>Commercial</b>	Streets which have 30% or above commercial establishment
<b>Residential</b>	Streets which have less than 30% commercial establishment

- 5.1.7.9 APP shall clearly indicate that unless on-street parking lots are earmarked and demarcated, parking at any other locations on-street (anywhere within the public roadway or street limits) shall be deemed illegal, even if No-Parking signage or marking have not been installed. However, some critical No-Parking zones, where safety hazard or restriction of emergency access may arise due to illegal parking, shall be demarcated on ground through appropriate physical design, signage and road markings as per IRC: SP: 12-2015 for the information of the general public and for ease of enforcement.
- 5.1.7.10 APPs shall identify location of signage, real-time information, parking meters, access control and other necessary devices for parking management at identified parking lots.
- 5.1.7.11 The concerned or affected citizen groups (like resident welfare associations, commercial establishment associations, transport operators and/or trade associations) shall be consulted before finalizing the Area Parking Plans by the respective Zonal Task Force.
- 5.1.7.12 Online portal may be developed by the civic agency for citizens to provide their requirements and preferences for parking, which could be considered while preparing the APPs.

#### 5.1.8 **Revision of APP**

- Once DULT prepares APPs, the Zonal Task Forces shall periodically (every 2-3 years) review the APP of their respective Zones to check for changes in parking demand with change in land use.
  - Any additional demand for parking may also be raised by citizens through the online portal of the civic agency and such requests shall also indicate the willingness to pay the required tariff for the same. Zonal Task Force shall duly consider such requests and assess the feasibility of providing the same.
  - Any revision/ modifications thus recommended to the Area Parking Plan by the Zonal Task Force shall be reviewed by DULT and then placed for approval of UMTA/Apex Committee.
- 5.1.9 The Area Parking Plans for all zones shall be adopted by the Master Plan for Bengaluru. The APPs shall also be vetted for revision once in 5 years and along with the revision of the Comprehensive Mobility Plan for the city.

## **POLICY 2: Charges for parking**

- 5.2.1 Parking consumes prime and scarce urban space in thriving business and commercial areas at the expense of other uses and hence when not charged incurs an opportunity cost. Road space is limited in Bengaluru and needs to be prioritised to promote sustainable modes of transport rather than store parked vehicles.
- 5.2.2 When parking is either free or heavily subsidized or bundled with other costs, the demand for parking inflates as users do not pay the true cost of parking utility. This may either lead to congestion on roads as people cruise for free parking, since parking supply cannot catch-up

with ever inflating demand or the high cost of supplying parking to meet the demand will be difficult to economically justify.

5.2.3 Hence, parking should not be provided free of cost and utilization of any designated public parking space shall be charged the true cost of parking (land & operational costs to begin with and subsequently adding environmental and social impact costs built into the parking price) from users wanting to avail parking directly on a use basis.

5.2.4 **Parking Charges Framework:**

The following framework shall be followed for pricing parking usage in Bengaluru.

5.2.4.1 Pricing on-street higher than off-street parking to move demand from on-street to off-street to help eliminate congestion, bottle necks, delay and reduced mobility efficiency arising from on-street parking.

- On-street parking price to be set at least 2 to 3 times higher than off-street parking.

5.2.4.2 Use differential pricing for various types of on-street parking to spatially distribute the demand for parking across a commercial or business district. Streets with high level of activity and congestion should be priced higher as opposed to roads with lower activity and congestion.

- The Area Parking Plan (APP) should identify non-residential roads that are within 250m around intense commercial areas and around transit stations subject to clause 5.2.4.4, where the on-street parking, if provisioned in the APP, shall be priced higher than other on-street parking fee.

5.2.4.3 **Pricing long duration on-street parking exponentially higher than short term** to ensure increased turnaround and discourage locking of on-street parking space for longer duration.

- On-street parking shall only be used for short duration parking (not exceeding 2 hours). In order to discourage long duration parking, a parking fee mechanism where long duration parking costs exponentially more than short duration needs to be adopted.

5.2.4.4 **Pricing to discourage parking near mass transport stations** in order to facilitate transit supportive functions (such as bus bay, IPT stand, cycle stands or pick up/drop off facilities) in the immediate surroundings of a transit hub.

- On-street parking shall not be provided on major roads within 250m around a metro station, TTMC, railway station or any other major public transit station.

5.2.4.5 **Pricing to ensure there is turnaround of parked vehicles and discourage abandonment of vehicles at off-street locations.**

- Parking longer than 48 hours should be charged twice the normal off-street price and
- Parking beyond 96 hours without necessary prepaid tickets should be treated as abandonment of vehicle for necessary action by traffic police.

5.2.4.6 **Pricing Residential Parking through a permit based system**

The strategy is discussed in detail in the section 5.4.4.

### 5.2.5 Mechanisms for charging:

Appropriate technology shall be utilized to inform users of parking charges and adopt user friendly ways to collect parking charges, while ensuring that the technology solution for charging is tamper proofed to avoid pilferage and is auditable.

### 5.2.6 Methodology to calculate non-residential parking fee:

5.2.6.1 On-street parking fee shall be calculated a multiple of the cost for providing an equivalent off-street parking in the same zone. Hence, the minimum parking fee to be levied in each zone shall be established as follows:

Type of Parking	Car Parking Fee
Off-street locations	Base car fee
On-street – Commercial Parking	1 to 3 times (Base car fee) Depending on location

Note: The type of on-street parking is determined in the APP

5.2.6.2 The following methodology shall be used to calculate the cost of base parking fee.

<b>STEP 1</b>	<p>Identify land value for a set number of location in each zone. For doing so, roughly about one location should be identified for every 4 sq.km of area. (Table below is indicative of the number of sample land values to be considered in each of BBMP's zones)</p> <table border="1"> <thead> <tr> <th>#</th> <th>Name of Zone</th> <th>Area</th> <th>No. of Locations per Zone (Approx.)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Yelahanka zone</td> <td>102.2 sq.km</td> <td>20</td> </tr> <tr> <td>2.</td> <td>Mahadevpura zone</td> <td>172.3 sq.km</td> <td>34</td> </tr> <tr> <td>3.</td> <td>RR Nagar zone</td> <td>109 sq.km</td> <td>22</td> </tr> <tr> <td>4.</td> <td>Dasarahalli zone</td> <td>29.4 sq.km</td> <td>6</td> </tr> <tr> <td>5.</td> <td>East zone</td> <td>92.2 sq.km</td> <td>18</td> </tr> <tr> <td>6.</td> <td>West zone</td> <td>49.9 sq.km</td> <td>10</td> </tr> <tr> <td>7.</td> <td>South zone</td> <td>60.7 sq.km</td> <td>12</td> </tr> <tr> <td>8.</td> <td>Bommanahalli zone</td> <td>95.7 sq.km</td> <td>19</td> </tr> </tbody> </table> <p>APP prepared for any other zones / areas in Bengaluru shall follow the above sampling procedure. Land value to be ascertained using latest guidance value published by the sub registrar's office.</p>	#	Name of Zone	Area	No. of Locations per Zone (Approx.)	1.	Yelahanka zone	102.2 sq.km	20	2.	Mahadevpura zone	172.3 sq.km	34	3.	RR Nagar zone	109 sq.km	22	4.	Dasarahalli zone	29.4 sq.km	6	5.	East zone	92.2 sq.km	18	6.	West zone	49.9 sq.km	10	7.	South zone	60.7 sq.km	12	8.	Bommanahalli zone	95.7 sq.km	19
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<b>STEP 2</b>	Eliminate land values that are below 15 <sup>th</sup> percentile and above 85 <sup>th</sup> percentile from the sample collated in step 1. Calculate average land value cost.																																				
<b>STEP 3</b>	<p>Calculate the average land value per car space per year (X).</p> $X = \frac{\text{Average land value per sq. ft. [value from step 2]} \times 350}{30}$ <p>Assuming that,</p> <ol style="list-style-type: none"> <li>The average life of a multilevel parking lot (RCC) is 30 years and</li> <li>One car space (with circulation space) is 350 sq. ft.</li> </ol>																																				
<b>STEP 4</b>	<p>Calculate the average construction cost per car space per year (Y).</p> $Y = \frac{\text{Average construction cost per sq. ft.} \times 350}{30}$ <p>Assuming that,</p> <ol style="list-style-type: none"> <li>The average construction cost per square feet is Rs.1500 per (2019)</li> <li>The average life of a multilevel parking lot (RCC) is 30 years</li> </ol>																																				

	3. Above value may be increased in accordance with the overall percentage increase in SR for Bengaluru zone.
<b>STEP 5</b>	Calculate average O&M cost per car space per year ( <b>Z</b> ). Assuming that, 1. The average O&M cost is Rs. 2.50 per sq. ft. per year
<b>STEP 6</b>	Average cost ( <b>C</b> ) of providing off-street car space per year calculated as $C = X + Y + Z$
<b>STEP 7</b>	Assuming average occupancy of parking space as 7 hours a day, base parking fee to be levied per hour of use at off-street parking locations: $Base\ Car\ Fee = \frac{C}{365\ (days) \times 7\ (hours\ occupancy)}$ <ul style="list-style-type: none"> <li>• Parking fee so determined shall be rounded off to nearest multiple of 5</li> <li>• Parking fee for 2-wheelers shall be 50% of car parking fee</li> </ul>

5.2.6.3 The base parking fee may be considered for revision by the civic agency once in two and a half (2.5) years by following the same methodology as described above. The Zonal Commissioner of each Zone shall be responsible to initiate the revision of the parking fee structure in a time bound manner.

5.2.6.4 If the average parking occupancy data over a year shows that more than 95% of parking space in a Zone is occupied for more than 5 hours in a day, then the following procedure may be followed to ensure there is some availability of parking within a zone.

- i. Civic agency shall strive to create additional off-street parking as envisaged in APP.
- ii. Explore possibility of increasing parking capacity by adoption of multi-level parking and automated parking systems
- iii. If all parking lots are developed as per APP, then the parking fee may be considered for increase to regulate the parking demand.

#### 5.2.7 Periodical Revision Parking Fee structure

- a. Parking fee structure shall be implemented as per the policy and approved by the civic agency.
- b. Revision of parking fees based on the policy shall be carried out by the Zonal Task Force in a time bound manner at least 4 months before the validity period expires.
- c. At any time when the fee structure is being revised, the civic agency shall also obtain consent of the Apex Committee.
- d. If the Zonal Task Force does not revise the fee structure within the stipulated time, the matter will be deemed as placed before the civic agency.
- e. If the civic agency does not approve the revision as per the policy within 2 months, the matter will be deemed to be placed before the Government or Apex Committee.
- f. For every deemed revision proposal received by the Apex Committee, a strict advisory shall be issued to the civic agency by Government for failure to act in time. Also, the Apex Committee must direct Commissioner of the civic agency to initiate disciplinary action against the officers of the Zonal Task Force.
- g. The Zonal Commissioner who heads the Zonal Task Force, will be solely responsible for initiating the approval of revision process as per the policy and severe action will be initiated against him if the deemed revision proposal has happened because of inaction of the Zonal Commissioner. However, Apex Committee may exempt action against Zonal Commissioner if he has moved the deemed revision proposal as the Zonal Committees

did not approve in spite of his best efforts as well as the civic agency and he proves that he has brought the revision proposal before Apex Committee before the revision cut-off date kicks in.

### POLICY 3: Streamlining on-street parking

5.3.1 Unregulated on-street parking is today consuming prime and scarce road space in thriving business and commercial areas at the expense of safe pedestrian footpaths and other transit supportive uses. Even where on-street parking is allowed, often they lack clear demarcation of parking bays, signage and professional management of parking. This leads to irregular parking, double parking and parking on footpath causing obstruction to vehicular and pedestrian circulation.

5.3.2 Hence, it is critical to organise and manage on-street parking so as to not only ensure that parking does not impinge upon seamless vehicular and pedestrian circulation but to also free up scarce street space for sustainable, transit and NMT supportive uses.

#### 5.3.3 Framework to streamline on-street parking:

5.3.3.1 **Banning of parking on congested streets and streets with high activity:** On-street public parking shall NOT be provided on:

- a. High-density mobility corridors, which may be defined as any road that functions as an arterial or sub-arterial or primary road or any major road that significantly serves traffic not just generated in and around the area, but also as a thoroughfare. (Where traffic count data is available).
- b. Any major roads (functioning as arterials, sub-arterials, collectors) where a major transit hub like metro stations, suburban stations, TTMC/major BMTC terminals, etc. is located, up to a distance of 250m.
- c. Any major roads (functioning as arterials, sub-arterials, collectors) where a multi-level or stack parking facility is located, up to a distance of 500m.
- d. Streets with high pedestrian activity (pedestrian only streets).
- e. Streets with high frequency of bus movement (with 5 min or less headways during peak hours)
- f. Roads with RoW of 9m or less.

The following guidelines can be considered for allocation of parking space on non-residential roads.

Public Roadway/ Street width	One Way Road	Two Way Road
< 9m	Parking NOT permitted	
9m – 12m	One sided parallel parking	Parking NOT permitted
12m – 15m	One sided parallel parking	One sided parallel parking
15m – 18m	Two sided parallel parking	One sided parallel parking
Greater than 18m	Two sided parallel parking	Two sided parallel parking

Note: The APP shall consider the planned function of the road, pedestrian and traffic volume on the road, where available and suitably allocate parking.

5.3.3.2 **Defining parking spaces through physical means:** A key initial step for effective regulation of on-street parking is to establish “parking” and “no-parking” zones. Parking areas should be

defined through physical means such as curbs, bulb-outs, signage and pavement markings. However, on-street parking may be minimally provisioned, based on necessity for short-term parking, provided such parking does not impact circulation of pedestrians and vehicles.

- 5.3.3.3 **Promoting para transit, NMT and shared mobility parking:** Non-motorised and electric shared mobility are emerging modes that needs to be accommodated and promoted alongside bicycle and para transit parking. At least 10% of the parking space (in Passenger Car Equivalent or PCE) in each designated on-street parking should be assigned for bicycle, para transit and other shared mobility parking.
- 5.3.3.4 **Prioritizing pick-up/drop-off, loading/un-loading over parking along street edge:** Road space should be prioritised for improving access for people to safely reach their places of activity by carving space for drop-off/ pick-up by private or shared mobility, bus bays etc. In addition, curb side bays may be provided for loading and unloading of goods in a safe manner along, without creating conflict with pedestrians & circulating vehicular traffic.
- 5.3.3.5 **Prevent long term on-street parking:** On-street parking, when needs to be provided, shall only be used for short duration parking (not exceeding 2 hours). In order to discourage long duration parking, a parking fee mechanism where long duration parking costs exponentially more than short duration needs to be adopted and/or time restrictions (maximum allowable duration) shall be notified through signage and enforced.
- 5.3.3.6 **Advance dissemination of information on parking availability:** On an average, 30 percent of the vehicles in congested business district traffic are cruising for parking (Shoup, 2006). By suitably adopting technology to disseminate information through app based interfaces and strategically based digital boards, the extent of driving around searching for parking lots can be significantly reduced.

#### 5.3.4 **Design Standards:**

Appropriate design standards should be followed while preparing and implementing the Area Parking Plan as follows to ensure on-street parking is optimised without creating safety concerns on road:

- On-street parking should not be allowed to at least 50 meters from intersections on each arm of a road at major intersections and at least up to 25 meters from intersections on each arm at minor intersections.
- Parking, when provided, should be provided at a reasonably safe distance away from pedestrian crossings and access to/from fire stations, police stations, transit stations, bus stops, electric substation, hospital and other emergency services. However, appropriate clear distance over-and-above the minimum requirements at intersections and access to emergency/priority services should be duly considered to ensure that parking, when provided, does not impinge safety or operational efficiency of roads at these locations.
- On-street parking spaces should be designed as per minimum requirements of IRC:SP:12-2015 to the extent possible. The design should minimize conflict between parking, walking and cycling.
- Parking spaces allocated to differently abled persons should be located closer to footpath ramps, elevators or access to establishments.

### **POLICY 4: Restriction on residential on-street parking**

- 5.4.1 Residential streets in neighbourhoods are meant for local movement and till a decade ago were also safe havens for light recreation by children and the elderly alike. However, today

most residential neighbourhood streets are overtaken by on-street parking rendering these streets not only unsafe but also at times inaccessible to ambulances and fire tender vans during an emergency. The absence of any regulation on residential area on-street parking coupled with rampant violations of the zoning regulations (ZR) of the masterplan, where the minimum parking mandated by the ZR is not adhered to has also resulted in significant increase in on-street parking demand.

- 5.4.2 Space on residential streets, especially when limited, should be prioritised for enhancing quality of life through implementing walkable streets, planting of trees, etc. Moreover, the burden of providing parking space for personal vehicles should be on the vehicle owner and met within his/her premises and not the civic agency. In the long-term, Bengaluru must aim to eliminate all on-street parking in residential areas and reclaim this space for common public good.
- 5.4.3 Such reclaimed residential street space will in turn be safer for walking and cycling and will lead to more people choosing to walk, cycle or use public transport. A steady shift towards sustainable mobility especially for last mile commute at the residential level will also ensure a lower private vehicle ownership. However, a phased approach is necessary to reduce inconvenience to the public and hence ensuring adoption.

This objective is sought to be achieved through the following strategies;

- a. To price and regulate on-street parking in residential areas for existing (built plots and already owned vehicles) through a well-structured permit system in the short-term (i.e. for up to 3 years)
- b. Adopt Proof of Parking for purchase of new vehicles (vehicles purchased after this policy is in place) to ensure that the owner has ensured availability of parking space within their property before purchasing a vehicle.
- c. Owners of plots, whose buildings are approved after this policy is in place is required to provide for requisite parking within their plot and such plot owners shall not be permitted to park on street in residential areas.
- d. Beyond 5 years, residential on-street space shall be gradually reduced, and the permits to limited number of on-street parking spaces to be auctioned through competitive bidding.
- e. In the long-term residential streets to be free of parking and all vehicular residential parking to be shifted off-street.
- f. Creating awareness and widespread citizen participation

#### 5.4.4 Area Parking Plan (APP) for Residential Area

5.4.4.1 The APP can follow the following guidelines for provision of residential on-street parking:

<b>Avg. Public Roadway/ Street width</b> (in meters)	<b>Road Functionality</b>	<b>Status of Parking</b> (2W and 4W)
<=9.0m	-	Parking is NOT Permitted
9.0m – 12.0m	Caters local traffic	Parking permitted on ONE side
9.0m – 12.0m	Connector to a major road	Parking is NOT Permitted
>12.0m	Caters local traffic	Parking permitted on BOTH side
>12.0m	Connector to a major road	Parking permitted on ONE side
>12.0m	major traffic road	Parking is NOT Permitted

Note: The actual parking space allocation may be determined based on site condition and traffic volume data, when available.

5.4.4.2 The APP shall also recommend circulation plans (For e.g. one-way pairs) for areas where there are limited thoroughfares and road widths are less than 9m.

#### **5.4.5 Permit system to regulate on-street parking in residential areas**

Regulating on-street parking in residential areas is also a useful tool to indirectly discourage violation of the ZR, especially in regard to parking provisions. Hence, a permit based system for allotting on-street parking space on residential roads to citizens is envisioned as a first step. It is imperative that the permit system is technology driven to ensure that the permits are administered with minimal inconvenience to people and through transparent process. The civic agency shall develop a permit based system for allotting on-street parking in residential areas to citizens.

- a. However, this permit shall only be availed by building owners/associations whose buildings were approved on or before the date of issue of this policy. All buildings approved after the notification of this policy shall have to provide for its complete parking needs within its own premises and residents of such building may not be eligible for obtaining on-street parking permits.
- b. The permits shall also be applicable for vehicles that were registered on or before the date of issue of this policy.
- c. The permit shall be issued for a period not exceeding ONE year. However, permits may be issued for shorter durations like quarterly and half-yearly as well. Following which, the civic agency shall re-allot permits.
- d. The permit shall be issued against an annual residential parking fee. The annual permit fee shall be determined by civic agency and shall not be less than 3% of the land value of one car parking area, provided that the permit fee does not exceed a ceiling amount (say Rs. 50,000 per annum) stipulated by the civic agency in consultation with Apex Committee or by UMTA.
  - Value of 1 car parking space = Guidance value in the area (per sq. ft.) x Area of one car (165 sq.ft)
  - Minimum annual permit fee (MPF) = 3% of value of 1 car parking spaceQuarterly and half-yearly permits shall be proportionately priced.
- e. The civic agency shall follow the guidelines set forth by this policy document in the Area Parking Plan sections while determining suitability of residential roads to provide parking.
- f. Priority may be given to residents of a street while issuing permits for that street.
- g. As the focus is to move parking of vehicles from on-street locations to off-street locations and to nudge a behavioural change in citizens, the permit system based on a fixed parking fee shall be replaced with an auction based permit system after 3 years, where the minimum bid price is not less than the minimum annual permit fee to urge citizens to provide parking within their property only.
- h. The civic agency shall also establish a transparent process for recording, escalating and resolving grievances of citizens regarding residential parking.

#### **5.4.6 Mechanisms to ensure a technology driven permit system**

5.4.6.1 It is imperative to have a technology driven spatial database of residential parking inventory both within properties and on road to ensure transparency, to understand the demand vs.

supply gap, to form the base for introducing proof of parking as a mandatory condition for purchase of vehicles and to inform future policy formulation.

- 5.4.6.2 As a first step, the civic agency shall immediately create a road by road spatial database with on-street parking inventory on residential streets by aligning with the Area Parking Plan guidelines. These parking spaces shall be assigned unique identification numbers and stored in a database along with geographic location details.
- 5.4.6.3 Road wise parking inventory shall be completed on priority basis and parking permits issued against identified on-street parking spaces. On issue of a permit, the database shall be automatically updated with assigned vehicle number, and other vehicle identification details. A permit tag shall also be issued indicating parking space id, vehicle number and validity period, so that owner can display the same in front windshield for easy verification of proof of permit.
- 5.4.6.4 Subsequently, the civic agency shall also carry out an enumeration to map the actual parking inventory available within plots as per the approved building plans. Each parking space within plots shall be assigned unique identification number and stored in the database with plot address and ownership details. Once this process is complete, vehicle owners desiring to apply for on-street residential parking permit, but has parking availability within a plot as per building plan shall be charged twice the parking permit fee.
- 5.4.6.5 The parking space tagging shall be automatically updated onto the database for all new building plan approvals.
- 5.4.6.6 The parking space database shall be mapped with vehicle registration database (VAAHAN) and owners of those vehicles without any assigned parking space (on-street or off-street) shall be issued a notice to update their parking location information in the database within 12 months. In case of failure to provide parking information within the stipulated time, the registered owner of the vehicles shall be penalized with hefty fines yearly.
- 5.4.6.7 The civic agency shall conduct surprise inspections as specified in Policy 9 to enforce the permit system and violators shall be served with hefty fines to the tune of 1/4th of annual parking fee. Automatic fines shall be issued with photographic evidence to the vehicle owner.
- 5.4.6.8 The parking space allocation information and availability of enumerated parking spaces shall be made available on-line to ensure transparency and enable self-validation by citizens. The civic agency shall create a web/mobile application to facilitate reporting violations by citizens.
- 5.4.7 **Proof of parking for vehicles registered or transferred after the policy is in place**  
Upon preparation of a citywide parking inventory with unique IDs assigned to each parking space, proof of parking to be made mandatory to purchase a vehicle, while registering new vehicles or transferring ownership of registered vehicles. Evidence of availability of parking space to be verified from computerized system.
- 5.4.8 **Creating awareness and widespread citizen participation**  
Any measure to place a price on an item that was previously free is likely to be met with resistance. The case of on-street parking in residential areas is also no different and requires widespread citizen participation to build a slow yet steady movement towards reclaiming residential street space from parking. Hence, the civic agency shall engage with elected

representatives and citizens at the ward level for creating awareness, building consensus and allocating parking space.

- 5.4.9 The civic agencies shall also encourage development of off-street residential parking through the mechanisms identified under the section on ‘Policy 5: Provision of off-street parking’.

### **POLICY 5: Provisioning for off-street parking**

- 5.5.1 When on-street parking is being regulated there is a need to quickly enhance the capacity of off-street parking to accommodate the demand for public parking. While the limited on-street parking facility as identified by the APP may support short-term parking needs, long duration parking needs of users like shopkeepers, building owners, office goers, etc. should be located only in off-street facilities.

#### **5.5.2 Mechanisms to develop off-street parking facilities:**

In order to give off-street parking the necessary impetus for easier adoption, suitable pricing mechanisms such as pricing on-street higher than off-street parking shall be adopted. The need for off-street parking is expected to be met in the following ways, especially in business and commercial centres.

- i. Free on-street parking has incentivised several property owners of especially commercial properties to violate minimum parking requirements and convert these in-house parking spaces into other uses. Introduction of pricing of on-street parking will serve as an encouragement for these properties to reinstate the minimum mandatory parking requirements for their customers/staff.
- ii. Pricing of on-street parking may encourage developed properties to make their underutilised parking inventory available to public on payment basis and may even entice owners of vacant plots.
- iii. In order to encourage owners of vacant plots to make their land available for off-street parking on a payment basis, the civic agency may enter into an agreement with owners of vacant plots (and Professional Parking Space Management Agency /operators) to facilitate development and operations of off-street parking facility, where the owner by himself may lack the wherewithal to operate such facilities. The terms of the agreement maybe be stipulated by the civic agency.
- iv. To encourage vacant plot owners to provision for MLCP, incentive mechanism like reduction in building plan approval fee, reduction in electricity rates, etc. may be formulated appropriately.
- v. Building owners, who have provisioned for parking within their property and such spaces are not utilized for parking of vehicles, should be encouraged by civic agency to rent such spaces for parking of other vehicles (residential or non-residential as the case may be)
- vi. The civic agency should engage an existing agency (such as KRDCCL or dedicated cell within BBMP) or establish a new parking space development agency to assess the demand vs. supply gap in economic and commercial centres and work towards building parking capacity in such non-residential areas. This dedicated agency for parking development shall have the mandate to
  - Identify suitable land, including CA sites, within a zone/parking district for development of parking infrastructure to meet the demand in lines with the Area Parking Plan.
  - Examination of feasibility and construction off-street (multi-level, stack parking, automated parking, etc.).

- Project development including assessing alternate business models for development of parking facilities
  - Administering contracts for development of parking infrastructure
  - Construction supervision of parking infrastructure
  - Handover the completed parking infrastructure to the civic agencies for operations.
  - The agency shall be responsible for maintenance of the parking facility until the services of an O&M concessionaire is procured by the civic agency.
  - The agency need not limit its activities to Bengaluru and may operate as a parastatals and extend its services state wide.
- vii. Based on the assessment of the Area Parking Plan, the civic agency/parking development agency may take up construction of multi-storied parking structures or stack parking in business and commercial centres where the supply is not being sufficiently met by the private sector. To the extent possible, such facilities should be taken up for construction through public private partnerships.

### 5.5.3 Design Standards for off-street parking facilities

When off-street parking is provided the following design standards should be followed.

- a. Open areas designated as parks, playgrounds, gardens, rivers, tanks/lakes, rajakaluve, floodplain to water bodies or any other kind of open space with public and ecological benefit in the masterplan should not be consumed for development of parking.
- b. Off-street parking locations should have good accessibility for vehicles to ingress and egress. Preferably must have access from other than major roads to avoid direct conflict with flowing traffic on major roads. Off-street parking facilities shall be most impactful if is located within 350-700m of an activity centre.
- c. The off-street parking spaces should be designed to comply with design standards as per the, IRC:SP:12-2015, National Building Code and BIS standards.
- d. Special provisions for parking for differently-abled shall be made as per Bureau of Indian Standards, National Building Code of India of 2016, IRC: SP:12:2015 and Harmonized Guidelines and Space Standards for barrier free built environment for persons with disability and elderly persons, 2016 of Ministry of Urban Development, Government of India.
- e. Stacked parking and valet parking should be appropriately considered to increase parking capacity at MLCP.
- f. MLCPs should also be equipped with facilities like electric buggy, bicycles (PBS), so that users of all abilities can park vehicles and access their destinations.

## POLICY 6: Regulation of transport vehicle parking

### 5.6.1 Parking of freight vehicles:

Freight related movement in cities is closely linked to location of wholesale markets, type of produce/item, existing distribution system etc. In order to improve freight related parking issues, the following short term and long term proposals are suggested.

#### *Short Term Strategies*

#### 5.6.1.1 Time based restriction for parking or loading/unloading of freight vehicles within city limits:

- Freight vehicles (HCVs, ICVs, MCVs and LCVs) shall not be allowed to park on-street or carry out loading/unloading activities on-street during the day (6am – 9pm).

### ***Long Term Strategies***

- 5.6.1.2 **Setting up of truck terminals at city periphery:** Truck terminals and warehousing facilities need be set up in city periphery in all major directions for heavy vehicles/trucks (HCVs or ICVs) to allow for commercial vehicles to park or carryout loading and unloading as necessary.
- 5.6.1.3 **Shifting of strategic wholesale markets to other peripheral locations to decongest city centre:** A separate study shall be taken up by civic agency to understand feasibility of shifting suitable wholesale markets from city centre to alternate peripheral locations.
- 5.6.2 **Parking of Intercity/interstate buses:**
- 5.6.2.1 A significant interstate and intercity travel demand is met by private and state owned buses. Presently, these buses are allowed to ferry passengers to the interiors of the city and have multiple pick-up and drop off points (which includes waiting and halting) and results in extreme traffic congestion and significant delays on roads.
- 5.6.2.2 Strategic locations to be identified for setting up of bus terminals (Satellite Bus Stations) and depots for state run and private intercity and interstate services. These should preferably be located near cross roads of major highways entering the city and peripheral ring road alignment, to allow for dispersion of traffic from these terminals along the circular roads (PRR & ORR), thereby reducing the need for all traffic to enter the congested city core before dispersing. Convenient access to one or more mass transit like metro, city bus services, suburban rail from these terminals is necessary.
- 5.6.2.3 These terminals should be well integrated with BMTC services, metro services, IPT services, park-and-ride facility and other feasible last mile connectivity services to ensure passengers are not significantly burdened by the need to transfer.
- 5.6.2.4 **BEFORE Satellite Bus Stations/Intermodal Transit Hubs (IMTH) are set up**
- Pick up and drop off of passengers by KSRTC buses are permitted at authorised stops as per the route map approved by RTA.
  - Pick up and drop off of passengers by other operators including other RTC buses and private buses permitted at authorised stops as per the route map approved by RTA.
  - Parking of KSRTC buses and privately operated buses shall be outside the public roadway or street limits and such agencies may park the buses within their own premises.
  - A stringent fine equivalent to 5 times the on-street full-day parking fee of 3 car spaces prevailing in that area shall be levied on all operators including KSRTC, other STUs and private operators who are found parking within the public roadway or street limits.
- 5.6.2.5 **AFTER Satellite Bus Stations are set up**
- Double the stipulated fine shall be levied for parking buses on-street during idle time anywhere within the city.
  - If the transport bus is not removed from on-street location within 24 hours, the Transport Department shall impound the vehicle and cancel the route permit.
- 5.6.3 **Parking of construction vehicles**
- 5.6.3.1 Parking of construction vehicles (CV) on road is proposed to be restricted to only night time between 11pm and 5am in order to bring a certain degree of control over chaos, bottlenecks and congestion created by construction vehicles when parked on-street. Parking of construction vehicle is restricted on all order of roads including residential streets.

5.6.3.2 Construction vehicles include HCV/LCV ferrying materials or any other vehicles aiding construction work. There is no restriction on carrying out construction activities if these construction vehicles are parked outside the public road way or street limits.

5.6.3.3 Construction vehicles that violate parking regulations shall be clamped and released on payment of penalty equivalent to 5 times the on-street full-day parking fee of 3 car spaces prevailing in that area. If the vehicle is not removed within 24 hours, the Transport Department shall impound the vehicle and cancel the state permit.

#### 5.6.4 **Parking provisions for school transport**

5.6.4.1 Most schools in the city do not have space for parking school buses and vans within the campus leading to haphazard parking of school buses and vans on roads. Large number of schools also do not have space for pick up and drop facility within their premises leading to not only parents stopping on the kerb edge and causing bottlenecks but also creating an unsafe environment for children.

5.6.4.2 The problem becomes significant as even new schools are now following this trend of facilitating parking, pick up and drop off on roads adjoining school premises. Hence, the following measures shall be put in place to mitigate the problem.

##### 5.6.4.3 **For Existing schools:**

- a. Schools may consider staggering the class timings of different standards so that the load experienced by roads during opening and closing hours is distributed over a few off-peak hours.
- b. School management shall prepare a circulation plan for pick up and drop off activities for school children within the school premises and get it approved by the Zonal Task Force. All schools must make arrangements to provide space for pick up, drop off and bus parking within their premises within a period of one year's time.
- c. School management shall also prepare a plan for parking of buses during idling hours within the school premises and get it approved by the Zonal Task Force.
- d. If any school does not have space for parking buses during idling hours within their premises, they must undertake to hire buses from BMTC or any other operator who runs buses throughout the day so that buses do not idle on roads after dropping the students.
- e. In case the schools are not able to create space for pick up and drop off even after 1 year, they must prepare a plan for pick up and drop off activities on roads adjacent to school premises with the least traffic density in such a way that the regular traffic flows without any disturbance during the pickup/drop off hours. However, schools shall ensure that children can safely walk into the school from the drop off location.
- f. Pick up and drop off on the roads as described in (5) will be on charge basis and the cost will be double the rate of regular parking fee.
- g. Pick up and drop off space shall be cordoned off for the particular time and manned by school security staff as per the directions of the Zonal Task Force.
- h. The Zonal Task Force shall prepare a list of general conditions in consultation with Bangalore Traffic Police (BTP) to govern pick up and drop off activities on road and the same which shall be strictly followed by all schools. All schools shall also provide an undertaking to follow the same without fail.

- i. The Bangalore Traffic Police (BTP) may also prescribe special conditions for pick and drop off facility on a case to case basis depending on the local conditions upon examining the plan submitted by the school concerned.
- j. The civic agency shall report to the education department the schools not complying with the above provisions to cancel their license/permit to run schools as they are causing nuisance to public and put the life of children in danger. BTP may also take action against the schools unwilling to cooperate for public good for endangering the lives of children and the general public.

#### 5.6.4.4 For New Schools:

- a. Any new school coming up must have both space for pick up and drop off and parking during idling hours. Else the civic agency must not give NOC for setting up school and the civic agency must also request education department to amend the prequalification for starting a school in any premise mandating the above said parking, drop off and pick up spaces.

### POLICY 7: Management of public parking

#### 5.7.1 Broad Parking Management Functions

Management of public parking facilities shall include the following activities:

- i. Identifying existing parking facilities within the parking concession area and making them available on a pay & use basis
- ii. All activities mentioned under policy 7 shall be performed using fool proof technology including collection of parking fee, booking of violation, grievance redressal etc..
- iii. Assisting users to find parking space within a parking lot (off-street and on-street)
- iv. Maintenance of parking lots and associated systems
- v. Bringing all public parking under one information network through web portal, mobile app, etc. for locating the parking lot and booking the slot
  - a. Identification of free parking spaces and make it available in the information network
- vi. Grievance redressal
- vii. Handling and curbing of unauthorized and illegal parking within the designated area
  - a. Penalizing of unauthorized/illegal parking
  - b. Clamping of unauthorized/illegal parking
- viii. Handing over of unclaimed confiscated/clamped/towed vehicles, which were not claimed within a week, to the Transport Department

#### 5.7.2 Responsibilities of agencies/institutions in parking management

5.7.2.1 The Zonal Commissioner, BBMP shall be responsible for administering the O&M within their respective zones through one or more professional agency (hereinafter referred as Parking Space Management Agency) as appropriate. Parking Space Management agencies appointed for operations and maintenance of parking districts shall utilize appropriate technologies for efficient operations and management of parking within the allotted area. The technologies shall be so designed to avoid revenue pilferage, be user friendly, provide direct usage & revenue reports to concerned government agencies to enable them conduct audits.

5.7.2.2 Parking Space Management Agencies shall collect and disseminate data in real-time on occupancy of parking lots (availability or non-availability of spaces within parking lots) to ensure people are kept informed of where parking is available within an area. Such information shall be displayed through several means like Variable Message Signs installed at critical locations, mobile applications, web applications, entrance of parking lots, at each floor of a multi-level parking lot, etc.

- 5.7.2.3 Parking Space Management agencies shall assist users in finding parking places and help in regulating irregular parking at designated on-street and off-street locations to ensure operations are carried out smoothly, without obstruction to circulation of pedestrians and vehicles in that area.
- 5.7.2.4 Performance audit of Parking Space Management Agencies shall be carried out by the Apex Committee to assess the effectiveness demonstrated by the agencies in upkeep of parking lots, monitoring, revenue collection and facilitation of public through an independent agency.
- 5.7.3 **Types of violations and management strategies**
- 5.7.3.1 Parking is considered as illegal in the following cases:
- Type 1.* Vehicles parked outside of designated parking locations (no parking zones).
- Type 2.* Particular type of vehicle parked on a space designated for different vehicle type.
- Type 3.* Vehicles parked irregularly or oversized vehicles obstructing circulation of people, vehicles and emergency access).
- Type 4.* Vehicles parked irregularly or oversized occupying more than one spot, but paid for one spot.
- Type 5.* Vehicles parked without paying or vehicles parked beyond the duration for which it has paid.
- 5.7.3.2 Where illegal parking (of Type 1) is observed, the professional agencies appointed by the civic agency shall inform the traffic police for enforcement. The penalty in such cases shall be as determined and notified by the traffic police in compliance to the MV Act. Police may levy additional charges in the event that clamping or towing becomes necessary as mentioned in Policy 9.
- 5.7.3.3 Where illegal parking (of Type 2, 3, 4 & 5) is observed the professional agencies appointed by the civic agency shall levy appropriate penalty in addition to the parking fee for the occupied parking space(s) and duration. The penalty in such cases shall be at least 2 times the parking fee for occupied duration and space(s). Civic agencies may be empowered to levy penalties for enforcing parking violations.
- 5.7.3.4 In case of Type 3 violation, where obstruction is significantly hampering parking operations, Parking Space Management Agency (with sufficient evidence) may remove the obstructing vehicle to a safe place within the parking lot. In such event, the civic agency may levy an administrative fee on the vehicle owner in addition to the penalty as mentioned in 5.7.3.3.
- 5.7.3.5 Emergency vehicles like Ambulances, Fire Engines on active duty may be exempted from parking charges and parking fines. However, these emergency vehicles shall not be exempted from parking charges and fines when idling.
- 5.7.3.6 The Parking Space Management Agencies shall maintain electronic and video proof of violation with time stamp and geo stamp using mobile apps as well as other electronic mechanisms. A text message shall be sent to the phone number linked to the registration number of the vehicle immediately upon booking of violation. The system should be so robust that there shall be no discretion required from the persons involved in the process. Any exemptions sought by the vehicle owner must happen in the form of an appeal against fine before any officer appointed for such purpose by the Zonal Commissioner.
- 5.7.3.7 The Parking Space Management Agencies shall maintain such evidence of violation (where penalised) in electronic format for a period of at least 1 year and make available to the civic agency or Government Agency as required within that duration.

- 5.7.3.8 The civic agency should devise mechanism for display of proof of disability for at least one passenger of the vehicle using disable parking slot in such a manner that the enforcing agencies can monitor and enforce any violations.

## **POLICY 8: Adoption of technology in efficient parking management and use of data**

- 5.8.1 For efficient management and enforcement of the plans to be prepared by civic agency it is crucial to adopt technology. The civic agency should endeavour to utilize latest technology for setting up parking spaces such as RFID tag, on-street meters, automated boom barriers, and computerized parking slips with timers, VMS parking boards, mobile applications, and so on. This will be implemented to assess parking demand; reduce monetary pilferage; reduce parking violation with parking meters; allow mobile payment; manage differential rates; inform users about parking availability.
- 5.8.2 All public parking related information should be integrated at a central control centre (Command Control Centre of BBMP). The civic agency shall use the data to disseminate information on availability of parking, pricing and parking restrictions, if any to users. This information could be disseminated to all users through various means like VMS boards, mobile app, web application, etc. to enable users to make informed decisions on parking choices.

## **POLICY 9 Enforcement of parking**

- 5.9.1 Strict enforcement of parking is crucial to achieve the desired objectives envisaged in this policy. The enforcement powers for penalizing of vehicles that violate the parking rules at on-street (commercial and residential) and off-street parking locations (lots) and to realize the penalties will be exercised by such officers of the civic agency by making necessary amendments to the Municipal Corporations Act or drafting applicable rules. Any parking violations outside of the on-street or off-street parking lot premises shall be considered as traffic violation and enforced by the traffic police
- 5.9.2 The civic agency shall strictly enforce corrective measures and penalisation in regard to violation of the Zonal Regulations/Building Bye-Laws with respect to parking. For violations in provision of parking as per Zonal Regulations, a penalty amounting to 2 times the stipulated property tax for residential properties and 4 times the stipulated property tax for commercial properties should be levied.
- 5.9.3 **Mechanisms for monitoring & enforcing parking violations:**
- 5.9.3.1 Monitoring and enforcement go hand in hand. A robust monitoring mechanism and a stringent enforcement are the very foundation of the entire parking policy. At the same time monitoring and enforcement must be easy to adopt, to the extent possible, must be less dependent on manpower and hassle free for the public through technology driven solutions. Monitoring and enforcement shall be the primary responsibility of the Zonal Task Force, who shall perform their duties through parking space management agencies.

Monitoring and enforcement (M&E) has to be dealt with for the following areas:

1. Residential areas
2. Non-residential areas

### **5.9.3.2 Strategies for Residential M&E**

- i. Use existing CCTV cameras installed by different public agencies like BBMP, BTP or any other agency.

- ii. Moving vehicle mounted with video camera scanner, which can read number plates of vehicles at least once a day of all residential roads.
- iii. RFID tag method can also be attempted if an order is passed by the Transport Commissioner mandating all vehicles plying in Bengaluru to have RFID.
- iv. Government of India has passed order mandating all transport/commercial vehicles to have GPS devices fitted by 2020. Tracking of idling time of transport/commercial vehicles using the GPS device data is another possibility.
- v. Use of local volunteers can also be thought of using RWAs and other associations.
- vi. Parking census once in a quarter during night time.
- vii. Any combination of the above methods or any other suitable methods, based on the availability/readiness on ground should be utilized for monitoring and enforcement on residential roads

#### 5.9.3.3 Strategies for Non-residential Areas M&E

- i. Use existing CCTV cameras installed by different public agencies like BBMP, BTP or any other agency. More CCTV cameras may be installed to ensure monitoring and enforcement is robust.
- ii. Moving vehicle mounted with video camera scanner, which can read number plates of vehicles at least once a day of all non-residential roads.
- iii. RFID tag method can also be attempted if an order is passed by the Transport Commissioner mandating all vehicles plying in Bengaluru to have RFID.
- iv. Government of India has passed order mandating all transport/commercial vehicles to have GPS devices fitted by 2020. Tracking of idling time of transport/commercial vehicles using the GPS device data is another possibility.
- v. Parking violation reporting by citizens using mobile app
- vi. Mandating the owners of commercial properties to report about parking violation in front of their properties.
- vii. Mandating commercial property owners to have one camera focused on the road in front of their properties, which would act as safety for their property as well as monitoring mechanism for parking violations.
- viii. All transport buses of BMTC can be fitted with a camera focusing on the road by government funding. This would give continuous data for parking violations and electronic record for all accident cases involving BMTC buses.
- ix. Any combination of the above methods or any other suitable methods, based on the availability/readiness on ground should be utilized for monitoring and enforcement.

5.9.3.4 If all these measures and any technology driven systems are put in place, the need for manpower for M&E will come down thus bringing down the cost of M&E. Apart from cost reduction, it will become irrefutable, hassle free, and citizens also cannot raise many grievances against the system. One of the major achievements of technology driven approach would be to eliminate pilferage/ corruption/ mismanagement all together.

5.9.3.5 Manpower may be deployed for bare minimum functions like assistance at parking lot, monitoring of parking lots, etc. by the professional agency.

5.9.3.6 Transport Department should mandate all transport vehicles (commercial, passenger, autos and taxis) to compulsorily install tamper proof vehicle tracking system (GPS/RFID) and automatically share the locational details to the Command Control Centre of BBMP/Smart City. The civic agency shall develop analytical capabilities to generate alerts of long duration

stopped transport vehicles (stoppage of 10 min or greater, on important roads) at undesignated stopping/ parking places. The civic agency shall monitor analysed stoppage alerts, periodically (monthly or quarterly) generate parking violation challans and send to registered owners of those transport vehicles.

- 5.9.3.7 Owners of illegally or wrongly parked vehicles shall be heavily fined and clamped, if necessary, by the Parking Space Management Agency or BTP for violations in the designated parking lots or outside the designated parking lots respectively. Only in the rare event, the violating vehicles if found to obstruct movement of vehicles or pedestrian traffic, such vehicles may be towed by the traffic police to ensure smooth movement of traffic and parking operations is restored.
- 5.9.3.8 However, the Civic agency and the Parking Space Management Agency shall strive to ensure that need for towing of vehicles shall be minimized through effective communication and active monitoring of parking lots as extensive towing operations itself usually lead to undesirable obstruction for movement of vehicles on roads.
- 5.9.3.9 When vehicles that are repeatedly found violating parking norms (with violation 5 times or more), vehicle registration of such vehicles shall be suspended by the transport department and vehicles should be clamped by the traffic police until the time suspension is revoked.
- 5.9.3.10 After a vehicle is suspended twice for violation of parking norms, such vehicles shall be flagged in VAAHAN database and mechanism should be devised such that the parking fee for such vehicles in the city (both for residential and non-residential) shall be twice the stipulated parking fee OR the cost of fuel for such flagged vehicles shall be priced twice the stipulated fuel price, whichever of the above is practical to implement.
- 5.9.4 In case a violating vehicle is removed by a towing service or impounded, as the case may be, the towing charges including the cost of manpower and the parking/ custody charges for the impounded vehicles should be levied as notified by the Bengaluru Traffic Police. These charges may be revised by BTP with inputs from the Zonal Task Forces from time to time.

#### **POLICY 10: Parking revenue and fine utilization**

- 5.10.1 The revenue generated from parking fee (or annuity obtained from Parking Space Management Agency) and parking fines shall be deposited in a dedicated Parking Fund Account created by the civic agency. The parking funds shall be ring-fenced and should be utilised by the civic agency only for maintenance of parking spaces and systems, development of new parking lots, to cover costs of parking operations and enforcement, local developmental works related to safety of pedestrians, road safety, development of Non-Motorised Vehicles (NMV) infrastructure, footpath improvement, improving public realm for pedestrian on streets (planting of avenue trees), improving transit infrastructure (like bus stops, bus bays, IMTH, etc.), strengthening of parking enforcement and carrying out parking awareness to citizens.